

WHAT IS CLAIMED IS:

1. An information processing method for an information processing apparatus receiving a supply of a second data stream generated on the basis of a first data stream and processing the second data stream, comprising:

a generation step of generating a third data stream from the second data stream on the basis of a predetermined condition; and

a first control step of controlling playback or recording of the third data stream,

wherein the second data stream has an arrangement that cannot be played or recorded without changing the arrangement, and

wherein the third data stream is generated in the generation step by rearranging, on the basis of the predetermined condition, the second data stream so that part or the entirety of the second data stream is playable or recordable.

2. An information processing method according to claim 1, wherein the predetermined condition includes a condition concerning the play time or the recording time controlled in the first control step, the upper limit of the play time or the recording time controlled in the first control step,

and/or information concerning the start position of playback or recording controlled in the first control step.

3. An information processing method according to claim 1, wherein, in the generation step, the third data stream is generated so that playback or recording of an arbitrary portion of the third data stream is controlled in the first control step.

4. An information processing method according to claim 1, wherein the second data stream includes a plurality of frames, the plurality of frames including a first frame type that has a data arrangement in which data cannot be played or recorded without changing the arrangement,

wherein, in the generation step, a second frame type is selected from the first frame type of the second data stream, and data in the second frame type is rearranged so that the data in the second frame type becomes playable or recordable.

5. An information processing method according to claim 4, wherein the predetermined condition includes the upper limit of the play time or the recording time controlled in the first control step, and

wherein, in the generation step, a plurality of frames of the second frame type, which are playable or recordable

within the play time or the recording time, are selected from the first frame type included in the second data stream on the basis of the predetermined condition, and data in the selected frames is rearranged.

6. An information processing method according to claim 5, wherein, in the generation step, the frames of the second frame type are selected from a plurality of portions of the second data stream so that the total play time or the total recording time is within the play time or the recording time.

7. An information processing method according to claim 1, further comprising:

- a storage control step of controlling storage of information indicating the predetermined condition; and/or
- an obtaining control step of controlling the obtaining of the information indicating the predetermined condition from the second data stream.

8. An information processing method according to claim 1, further comprising;

- an obtaining control step of controlling the obtaining of a fourth data stream including information required to recover the first data stream from the second data stream;
- a recovering step of recovering the first data stream

from the second data stream on the basis of the fourth data stream, the obtaining of which is controlled in the obtaining control step; and

a second control step of controlling playback or recording of the first data stream recovered in the recovering step.

9. An information processing method according to claim 8, wherein the fourth data stream, the obtaining of which is controlled in the obtaining control step, includes first data required to recover the first data stream, and

wherein, in the recovering step, the first data stream is recovered by replacing part of the first data included in the fourth data stream with second data included in the second data stream.

10. An information processing method according to claim 9, wherein the second data is written in the second data stream at a position not referred to when the third data stream is generated from the second data stream in the generation step and when playback or recording of the third data stream is controlled in the first control step.

11. An information processing method according to claim 9, wherein the second data stream is an encoded data

stream, and

wherein the first data includes a variable-length code.

12. An information processing method according to claim 9, further comprising an inverse-transformation step of inverse-transforming frequency components,

wherein the second data stream is a data stream generated by being transformed into frequency components and then being encoded, and

wherein the first data includes spectral coefficient information.

13. An information processing method according to claim 9, further comprising a decoding step of decoding the second data stream,

wherein, when the second data is decoded in the decoding step, the data length of the decoded second data is shorter than the data length of the decoded first data.

14. An information processing method according to claim 9, wherein the second data stream is an encoded data stream, and the first data includes the number of quantization units, and/or

wherein the second data stream is a data stream generated by being separated into first signals and second

signals and then being encoded, and the first data includes the number of separated first signals.

15. An information processing method according to claim 8, wherein the fourth data stream, the obtaining of which is controlled in the obtaining control step, includes data required to recover the first data stream, and

wherein, in the recovering step, the first data stream is recovered by inserting part of the data included in the fourth data stream into the second data stream.

16. An information processing method according to claim 15, wherein the second data stream is an encoded data stream, and the data included in the fourth data stream is normalization coefficient information, and/or

wherein the second data stream is an encoded data stream, and the data included in the fourth data stream is quantization accuracy information.

17. An information processing method according to claim 1, further comprising a decoding step of decoding the third data stream,

wherein, in the first control step, playback or recording of the third data stream decoded in the decoding step is controlled, and

wherein the second data stream is an encoded data stream.

18. An information processing apparatus receiving a supply of a second data stream generated on the basis of a first data stream and processing the second data stream, comprising:

generation means for generating a third data stream from the second data stream on the basis of a predetermined condition; and

control means for controlling playback or recording of the third data stream.

19. A program executable by a computer for controlling an information processing apparatus receiving a supply of a second data stream generated on the basis of a first data stream and processing the second data stream, the program comprising:

a generation step of generating a third data stream from the second data stream on the basis of a predetermined condition; and

a control step of controlling playback or recording of the third data stream.

20. An information processing method for an

information processing apparatus transforming a first data stream into a second data stream, comprising:

a first replacement step of replacing first data included in the first data stream with second data to generate a third data stream;

a changing step of changing the arrangement of third data included in the third data stream generated in the first replacement step;

an insertion step of inserting information indicating a condition for playback or recording of the second data stream into the third data stream in which the arrangement of the third data is changed in the changing step; and

a first generation step of generating the second data stream on the basis of the third data stream including the information indicating the condition, the information being inserted in the insertion step,

wherein, in the changing step, the third data recorded in a first area of the third data stream is moved to a second area.

21. An information processing method according to claim 20, wherein the first area is an area that is in the third data stream and that is associated with an area referred to during playback or recording of the second data stream generated in the first generation step, and



wherein the second area is an area that is in the third data stream and that is associated with an area not referred to during playback or recording of the second data stream generated in the first generation step.

22. An information processing method according to claim 21, wherein the second area is an area that is in the third data stream and that, by replacing the first data with the second data in the first replacement step, becomes associated with an area not referred to during playback or recording of the second data stream.

23. An information processing method according to claim 22, wherein the first data is data concerning the number of pieces of information referred to during playback or recording of the second data stream, and

wherein, in the first replacement step, the first data is replaced with the second data indicating that there is no information referred to during playback or recording of the second data stream.

24. An information processing method according to claim 20, wherein the first data stream, the second data stream, and the third data stream each include a plurality of frames,

wherein, in the insertion step, the information indicating the condition is inserted into at least one of the plurality of frames of the third data stream, and

wherein the frames included in the second data stream generated in the first generation step include information indicating whether or not the information indicating the condition is inserted in the insertion step.

25. An information processing method according to claim 20, wherein the information indicating the condition, which is inserted into the third data stream in the insertion step, includes a condition concerning the play time or the recording time when playing or recording the second data stream and/or information concerning the start position of playback or recording when playing or recording the second data stream.

26. An information processing method according to claim 20, further comprising a separation step of separating fourth data from the first data stream, the fourth data differing from the first data and the third data.

27. An information processing method according to claim 26, further comprising an encoding step of encoding input data,

wherein the fourth data includes normalization coefficient information on the encoding in the encoding step and/or quantization accuracy information on the encoding in the encoding step.

28. An information processing method according to claim 20, further comprising a second generation step of generating a fourth data stream required to recover the first data stream from the second data stream generated in the first generation step,

wherein the fourth data stream generated in the second generation step includes the first data replaced with the second data in the first replacement step.

29. An information processing method according to claim 28, further comprising a separation step of separating fourth data from the first data stream, the fourth data differing from the first data and the third data,

wherein the fourth data stream generated in the second generation step further includes the fourth data separated in the separation step.

30. An information processing method according to claim 20, further comprising an encoding step of encoding input data,

wherein, in the first replacement step, encoded data encoded in the encoding step serves as the first data stream, and the first data included in the first data stream is replaced with the second data.

31. An information processing method according to claim 30, wherein the first data includes information indicating the number of quantization units in the encoding in the encoding step.

32. An information processing method according to claim 30, further comprising:

a frequency component transformation step of transforming input data into frequency components; and

a separation step of separating the frequency components generated by transformation in the frequency component transformation step into first signals including tone components and second signals other than the first signals,

wherein, in the encoding step, different encoding processes are performed on the first signals and the second signals.

33. An information processing method according to claim 32, wherein the first data is data indicating the

number of first signals separated in the separation step.

34. An information processing method according to claim 20, further comprising a second replacement step of replacing fourth data with fifth data, the fourth data differing from the first data included in the first data stream,

wherein the fifth data is associated with data not referred to during playback or recording of the second data, and

wherein, in the changing step, the arrangement of the third data included in the third data stream in which the fourth data is replaced with the fifth data in the second replacement step is changed.

35. An information processing method according to claim 34, wherein the fifth data is generated by replacing at least part of the fourth data with random data.

36. An information processing method according to claim 34, further comprising a second generation step of generating a fourth data stream required to recover the first data stream from the second data stream generated in the first generation step,

wherein the fourth data stream generated in the second

generation step includes the fourth data replaced with the fifth data in the second replacement step and position information indicating the position of the fourth data in the first data stream.

37. An information processing method according to claim 34, further comprising an encoding step of encoding data,

wherein, when the fifth data is decoded, the data length of the decoded fifth data is shorter than the data length of the decoded fourth data.

38. An information processing method according to claim 34, further comprising an encoding step of encoding data,

wherein the fourth data includes a variable-length code.

39. An information processing apparatus transforming a first data stream into a second data stream, comprising:

replacement means for replacing first data included in the first data stream with second data to generate a third data stream;

changing means for changing the arrangement of third data included in the third data stream generated by the replacement means;

insertion means for inserting information indicating a condition for playback or recording of the second data stream into the third data stream in which the arrangement of the third data is changed by the changing means; and

generation means for generating the second data stream on the basis of the third data stream including the information indicating the condition, the information being inserted by the insertion means,

wherein the changing means moves the third data recorded in a first area of the third data stream to a second area.

40. A program executable by a computer for controlling an information processing apparatus transforming a first data stream into a second data stream, comprising:

a replacement step of replacing first data included in the first data stream with second data to generate a third data stream;

a changing step of changing the arrangement of third data included in the third data stream generated in the replacement step;

an insertion step of inserting information indicating a condition for playback or recording of the second data stream into the third data stream in which the arrangement of the third data is changed in the changing step; and

a generation step of generating the second data stream on the basis of the third data stream including the information indicating the condition, the information being inserted in the insertion step,

wherein, in the changing step, the third data recorded in a first area of the third data stream is moved to a second area.